CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.13/RS/CSR-4/0122d/CEMENT/2016-17 Date: 05.04.2016

TEST REPORT ON CEMENT

*** CUSTOMER**	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
***AGENCY**	:	**Mr. R. Shivaram ,** #4/13, Avalamma Choultary layout, Magadi Road, Bangalore-23.
***NAME OF THE WORK**	:	Construction of RCC drain in 2nd cross road at Prashanatha nagara in Ward No.13, BBMP, Bangalore.
REFERENCE	:	AEE/SSD/PR/ QC/53 /2016-17 Dated: 02.04.2016
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	02.04.2016
PERIOD OF TESTING	:	02.04.2016 to 05.04.2016

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	155Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	475 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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****

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Job No.: CTCE/BBMP/W.No.13/RS/CSR-4/0122d/SAND/2016-17 : 05.04.2016

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. R. Shivaram ,**
#4/13, Avalamma Choultary layout, Magadi Road, Bangalore-23.

*** Name of Work** : Construction of RCC drain in 2nd cross road at Prashanatha nagara in Ward No.13, BBMP, Bangalore.

Reference : AEE/SSD/PR/ QC/53 /2016-17 Dated: 02.04.2016

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 02.04.2016

Date of Testing : 05.04.2016

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	0	0	100	100
4.75	93.50	90-100	90-100	90-100	95-100
2.36	82.50	60-95	75-100	85-100	95-100
1.18	59.50	30-70	55-90	75-100	90-100
600 Micron	42.50	15-34	35-59	60-79	80-100
300 Micron	24.50	5-20	8-30	12-40	15-50
150 Micron	3.50	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-II specific limits.

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Job No.: CTCE/BBMP/W.No.13/RS/CSR-4/0122d/AGG/2016-17 : 05.04.2016

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. R. Shivaram ,**
#4/13, Avalamma Choultary layout, Magadi Road, Bangalore-23.

*** Name of Work** : Construction of RCC drain in 2nd cross road at Prashanatha nagara in Ward No.13, BBMP, Bangalore.

Reference : AEE/SSD/PR/ QC/53 /2016-17 Dated: 02.04.2016

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 02.04.2016

Date of Testing : 05.04.2016

Total Wt. of Aggregates in gms= **5000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.70	95-100	85-100
20	68.45	30-70	0-20
10	25.95	10-35	0-5
4.75	2.75	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/W.No.13/RS/STEEL/2016-17 07.04.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	:	**Mr. R. Shivaram ,** #4/13, Avalamma Choultary layout, Magadi Road, Bangalore-23.
Name of the work	:	Construction of RCC drain in 2nd cross road at Prashanatha nagara in Ward No.13, BBMP, Bangalore.
Reference	:	AEE/SSD/PR/ QC/53 /2016-17 Dated: 02.04.2016
Date of Test	:	07.04.2016
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	8	0.40	510	550	13.10	O.K	O.K

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AE-13

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ನಂ. ೧೪, ಈ.ಎ.ಸಿ ಬಡಾವಣೆ, ಬೆಂಗಳೂರು

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Job No.: CTCE/BBMP/W.No.13/RS/STEEL/2016-17 07.04.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Mr. R. Shivaram ,** #4/13, Avalamma Choultary layout, Magadi Road, Bangalore-23.

Name of the work : Construction of RCC drain in 2nd cross road at Prashanatha nagara in Ward No.13, BBMP, Bangalore.

Reference : AEE/SSD/PR/ QC/53 /2016-17 Dated: 02.04.2016

Date of Test : 07.04.2016

Technical Reference : IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	512	556	13.15	O.K	O.K

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T-2377

Job No.: CTCE/BBMP/W.No.13/RS/CSR-4/0122d/CUBE/2016-17 09.05.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. R. Shivaram ,**
#4/13, Avalamma Choultary layout, Magadi Road, Bangalore-23.

*** Name of the work** : Construction of RCC drain in 2nd cross road at Prashanatha nagara in Ward No.13, BBMP, Bangalore.

*** Reference** : AEE/SSD/PR/ QC/53 /2016-17 Dated: 02.04.2016

*** Sample ID** : RCC drain concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as o : 28^{th} day

Sample Received on : 09.05.2016

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	11.04.2016	09.05.2016	8.165	488.3	21.70
2	11.04.2016	09.05.2016	8.180	512.6	22.78
3	11.04.2016	09.05.2016	8.250	515.3	22.90

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Job No.: CTCE/BBMP/W.No.13/RS/CSR-4/0122d/CUBE/2016-17 11.05.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. R. Shivaram ,**
#4/13, Avalamma Choultary layout, Magadi Road, Bangalore-23.

*** Name of the work** : Construction of RCC drain in 2nd cross road at Prashanatha nagara in Ward No.13, BBMP, Bangalore.

*** Reference** : AEE/SSD/PR/ QC/53 /2016-17 Dated: 02.04.2016

*** Sample ID** : RCC drain concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as o: 28^{th} day

Sample Received on : 11.05.2016

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	13.04.2016	11.05.2016	8.188	490.3	21.79
2	13.04.2016	11.05.2016	8.215	515.6	22.92
3	13.04.2016	11.05.2016	8.230	520.2	23.12

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11/5

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
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ಎಸ್.ಎಂ ರಸ್ತೆ, ಮಲ್ಲೇಶ್ವರಂ, ಬೆಂಗಳೂರು

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ob No.: CTCE/BBMP/W.No.13/RS/CSR-4/0122d/Pre cast slab/2016-17 25.04.2016

TEST REPORT ON CONCRETE CORE (PRE CAST SLAB)

Name of Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Name of Agency	:	**Mr. R. Shivaram ,** #4/13, Avalamma Choultary layout, Magadi Road, Bangalore-23.
Name of work	:	Construction of RCC drain in 2nd cross road at Prashanatha nagara in Ward No.13, BBMP, Bangalore.
Reference	:	AEE/SSD/PR/ QC/53 /2016-17 Dated: 02.04.2016
Technical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Sample ID	:	Pre cast slab
Sample Received on	:	20.04.2016
Date of Testing	:	25.04.2016

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
	50.00	77.00	0.388	2566.32	1.54	0.955	32.25	16.42	17.74	16.94	21.18
	50.00	79.00	0.397	2559.37	1.58	0.960	32.95	16.78	18.12	17.40	21.75
	50.00	80.00	0.402	2559.21	1.60	0.960	33.40	17.01	18.37	17.64	22.05

* nformation is furnished by the Customer/Representative

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25/4

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